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*A School's Guide to  
Purchasing  
Washington-Grown  
Food*

# Food Safety and Handling

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# Verifying On-Farm Food Safety

Prior to purchasing produce from a local farm, school nutrition operators should visit the farm to observe key food safety practices and ask questions about produce handling. Because a visit will require time from the farmer's schedule as well as your schedule, you may wish to organize a group visit with other school nutrition directors in your purchasing cooperative or local area. Information in this document can be used to ensure that you collect sufficient information on your visit to make an informed decision about purchasing from the farm.

## Finding a Farm

Finding farms to work with is the first step. Follow these suggestions to locate farms that may be a good fit for your operation:

- Contact your state farm to school coordinator, if applicable. Check with the state department of education or agriculture to find out if there is a farm to school coordinator in your state.
- Contact your state department of agriculture or check their website for lists of farms in your area.
- Contact cooperative extension agent(s) in your area.
- Contact other school nutrition directors in your area who are purchasing local products from farms.
- Talk to farmers at your local farmers' markets.
- Visit [www.ams.usda.gov/gapghp](http://www.ams.usda.gov/gapghp) for a list of farms that have been certified in Good Agricultural Practices/Good Handling Practices through USDA's third party audit program.
- Search on farm to school or community-based agriculture websites.

## What Are Good Agricultural Practices (GAPs)?

GAPs are a collection of principles that apply to on-farm production and post-production processes. The Food and Drug Administration (FDA) published guidance in 1998 to outline eight basic principles of microbial food safety within the realm of growing, harvesting, packing, and transporting fresh produce. Using these principles, farmers can develop proactive, preventive controls to reduce the opportunity for microbiological, chemical, and physical hazards that affect the safety of the produce.

### Resources:

- Guidance for Industry: Guide to Minimize Microbial Food Safety Hazards for Fresh Fruits and Vegetables (FDA, 1998)
- National GAPs Education Program, Cornell University, <http://www.gaps.cornell.edu/index.html>
- Joint Institute for Food Safety and Applied Nutrition (JIFSAN)  
<http://www.jifsan.umd.edu/training/gaps.php>



# Verifying On-Farm Food Safety, continued

## Planning Your Farm Visits

Plan to visit the farm and observe food safety practices before purchasing produce. If you plan to purchase products from multiple farms, or are already buying from multiple farms, visit each one.

### Initial Steps

- If you are not already buying from the farm, contact the farmer to explain who you are and your role as a potential buyer for your school nutrition program.
- Ask whether the farmer is interested in being a potential seller to your district. Several conversations may be necessary to determine whether the farmer may want to sell to your school district.
- Explain that your responsibility as a school nutrition director is to ensure that food is purchased from suppliers who have food safety practices in place.
- Explain to the farmer that you would like to observe on-farm food safety practices, such as how produce is harvested, how equipment and facilities are cleaned and sanitized, etc.
- Establish a form of communication. Ask whether it is best for future contact to be by telephone or email.

### Scheduling the Visit

- Find out what produce is grown on the farm and when it is harvested. Ask if any produce might be available to observe in the field or after harvest during the visit. Ask whether the farmer will be able to discuss the growing and handling practices of produce that is not currently in season.
- Send the farmer the *Checklist for Retail Purchasing of Local Produce\**, or a similar tool, prior to the visit. Explain that you would like to discuss the items on the checklist, and ask the farmer to review it prior to your visit. Explain why these are points of interest.
- Confirm school district requirements for farm liability insurance coverage for any products purchased from the farm. Discuss the requirements with the farmer.
- Determine a date and time to schedule a visit. Be flexible on time of day and day of week because farmers usually work long hours throughout the week that may not align with your hours of operation.
- Determine who will be visiting the farm and with whom you will be visiting at the farm.
- Discuss how much time will be available for the tour and how much time will be available after the tour for additional questions.
- Be sure to get the farm's address, driving directions and instructions on the best location for parking.
- Answer any questions the farmer has about your visit and your expectations.





## Verifying On-Farm Food Safety, continued

### Preparing for the Farm Visit

- Wear appropriate attire and bring items that may be needed, such as comfortable, closed-toed, sturdy shoes, hats, sunglasses, sunscreen, water, notebook, and pen/pencil. Be prepared to walk around the farm and be outside for extended periods of time.
- Restroom facilities may or may not be available. Ask ahead and plan appropriately.
- Ask the farmer if photographs or videos are allowed and explain how these may be used, such as appearing on the school district's website. This exposure may enhance the farmer's recognition in the community. If using photographs or videos, a signed release form is recommended and may be required by your district.
- Confirm employer insurance policies for accidents or injuries that could occur during the site visit.

### Farm Operations to Observe

During your visit, ask questions about food safety practices related to each area of the operation. Review and discuss items on the *Checklist for Retail Purchasing of Local Produce\**, or similar checklist, as appropriate. Be prepared to follow any sanitation and safety procedures required by the farm. You may be asked to wear hairnets, gloves, and shoe coverings. Observe as much of the farm operation as possible, including the following:

- Products currently growing in the field.
- Equipment and supplies, such as tractors, harvesting containers, harvesting equipment, cleaning and sanitizing equipment, and delivery trucks.
- Facilities, including packing sheds, on-site storage locations, and chemical storage facilities, if applicable.
- Storing, harvesting, or packing process, if possible.

### Food Safety Discussion Topics

Discuss the following topics, using the *Checklist for Retail Purchasing of Local Produce\** or a similar checklist, as a guide.

- |                                     |   |
|-------------------------------------|---|
| • Land use history                  | • Liability insurance   |
| • Soil composition and testing      | • Traceability methods  |
| • Water sources                     | • GAPs audit results and documentation, if farm is GAPs certified |
| • Wildlife control                  | • Organic procedures, if applicable                               |
| • Composting practices              | • Handling and processing procedures, if applicable               |
| • Chemical and pesticide management |   |
| • Crop selection                    |   |



## Verifying On-Farm Food Safety, continued

### Purchasing Discussion Topics

The farm's typical procedures for working with customers may differ from your school district's procedures for working with vendors. Learn how the farmer prefers to do business, and be willing to be flexible, if you can. Ask about delivery practices. Remember that farmers typically receive payment immediately and may not be willing or able to wait several weeks.

### Delivery capacity

- Does the farmer deliver?
- Can the farmer deliver in refrigerated trucks?
- How often is the farmer willing to deliver?
- What day(s) of week and time(s) of day could deliveries take place? What day(s) of week and time(s) of day could produce be picked up, if deliveries are not possible.
- Does the farmer currently work with any distributors?

### Ordering and Payment

- How does the farmer handle ordering?
- How does the farmer invoice?
- How does the farmer accept payment?
- Would the farmer be willing to negotiate an alternate arrangement to his/her standard practices?

### Farm Operations to Observe

- Thank the farmer for his or her time.
- Provide any additional information requested by the farmer in a timely manner.
- Invite the farmer to visit your facility.

### References

Cornell National GAPs Program <http://www.gaps.cornell.edu/>

\*Iowa State University, Checklist for Retail Purchasing of Local Produce <http://www.extension.iastate.edu/Publications/PM2046A.pdf>

Iowa State University Resources, Local Foods: From Farm to Food Service  
<http://www.extension.iastate.edu/HRIM/LocalFoods/From%20Farm%20to%20Foodservice.htm>

Penn State University <http://extension.psu.edu/food-safety/farm>

University of California Davis GAPs <http://ucgaps.ucdavis.edu/>



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## **On-farm food safety information for food service personnel**

Farm to School is growing rapidly across Minnesota and many schools are interested in purchasing directly from nearby farmers. The goal of this document is to provide a list of questions about *on-farm* food safety practices that food service personnel can use when talking with farmers from whom they are considering purchasing fresh fruits and vegetables. These questions do not pertain to food safety in your food service kitchen facility. Rather, they relate to *on-farm* food safety. This means the steps that the farmer took to minimize the risk of contamination as the food was grown, harvested and transported to your kitchen door.

The questions are meant to be a guide so that you can have an informed discussion with a farmer about the food safety practices that they use on their farm. Food is grown in the soil, and under the sky, and there will always be some risk of contamination: the goal is not to have farmers eliminate this risk, but rather to minimize it through best practices to ensure the safety of consumers.

Most farmers are very committed to on-farm food safety, and farmers should not be offended if you ask about their food safety practices. If done in a conversational manner, most farmers will be happy to talk about their practices. You need to be comfortable with their answers, and if not, explore if they are willing to make some changes or consider not purchasing from the farmer at that time.

Visiting the farm is another great way to get to know the farmer and their operation. By visiting the farm, you can get a good idea of the farmer's operation and their food safety practices.

### **Getting started talking with farmers about food safety:**

Open with: "Can you tell me a little about your food safety practices?" or, "How do you address food safety on your farm?"

As you listen to their response, listen for these words or concepts:

- I have a written food safety plan
- I test my well water annually

- We train all of our staff on our food safety protocols including hygiene, illness and injury reporting
- We don't use raw manure; or, we apply raw manure in the fall; or, we buy composted manure
- I am certified organic or am certified by the Food Alliance. (While organic and Food Alliance standards are not food safety standards, certified growers often have many key food safety practices in place on their farm to meet these certification standards)
- I've passed a GAP (Good Agricultural Practices) audit, or intend to schedule on-farm food safety audit. (GAP is similar to a HACCP plan for farmers, but very few farmers in Minnesota are GAP audited, so do not expect the farm to have an audit certificate)
- I haven't gone through a GAP audit but I've adopted the *on-farm* food safety practices that are relevant for my farm

### **Here are some probe questions to ask about their food safety practices:**

#### **Farm and production practices**

- 1.) Do you have a written food safety plan or standard operating procedures related to food safety? If not, how do you document and ensure food safety on your farm? (If they say no to these questions or do not seem to have thought about food safety, you may consider making a farm visit)
- 2.) Will the produce be rinsed or washed? (If they rinse or wash their produce, it needs to be done with potable water). How often do you have the well water tested for contaminants and how do you treat and manage your wash water?
- 3.) What do you do to keep livestock and other animals (including dogs) out of vegetable fields?
- 4.) How is the produce kept cool and covered before delivery? (on farm and in delivery vehicle)

#### **Worker health and hygiene**

- 1.) Do you have health and hygiene training for employees? What does it cover? (Listen for: training on hand washing procedures, illness and injury reporting)
- 2.) Are restrooms with hand washing facilities including single-use towels, soap and clean running water available to all workers? (note: sanitizing gels are not a substitute for hand washing)
- 3.) Are workers excluded from handling food products if they are ill or have a fever or diarrhea?



## Packaging and Tool Cleanliness

- 1.) How will product be packaged? Have boxes been used previously, and if so for what? (Boxes should appear clean and intact, like new, when the produce arrives. Boxes that have held meat or poultry should not be used to transport produce.)
- 2.) How often do you clean your harvest tools and containers? (There is no one right answer. The tools should be cleaned at the end of the day. The containers should appear clean.)
- 3.) Where do you pack your produce? (They may field pack or have a packinghouse. Produce should be kept off the ground. Packinghouse surfaces should be regularly cleaned and sanitized)

**Note:** You can also observe the farmer and the delivery vehicle. Look at their truck. Is it clean? Use your own observation tools. Employees who are in charge of taking in produce should also be told to observe the delivery truck and to share any concerns about cleanliness. What else is in the truck? Is there evidence of a dog in the truck? Is the truck free of trash and debris unrelated to the vegetables? Are there any odors?

### For more information, please see the following resources:

UMN website with food safety record-keeping templates for farmers and links and schedule of GAPs workshops for farmers: <http://safety.cfans.umn.edu/>

Cornell Food Safety and GAPs information: <http://www.gaps.cornell.edu>

### For more information or with questions, please contact:

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[Sample on-farm food safety checklist from Bozeman Public Schools]

Local Produce Procurement Checklist

Name of Producer/Farm: \_\_\_\_\_

Address: \_\_\_\_\_ City: \_\_\_\_\_ Zip \_\_\_\_\_

Telephone: \_\_\_\_\_ E-mail: \_\_\_\_\_

Products to be purchased: \_\_\_\_\_

Production & Handling Practices	Yes	No	N/A
What is irrigation source? <input type="checkbox"/> Well <input type="checkbox"/> Stream <input type="checkbox"/> Pond <input type="checkbox"/> Municipal <input type="checkbox"/> Other _____			
If well water is used, is well protected from contamination?			
Is raw manure incorporated at least 2 weeks prior to planting and/or 120 days prior to harvest?			
Is land use history available to determine risk if product contamination?			
Is the field protected from any chance of run-off from animal confinement or grazing areas?			
Are portable toilets used in a way that prevents field contamination from waste-water?			
Is dirt, mud, or other debris removed from the product before packing?			
Is rinse (potable) water source tested at least once a year and results kept on file?			
Are food product contact surfaces washed, rinsed and sanitized before using?			
Are harvesting baskets, totes, or other containers kept covered and cleaned (with potable water) and sanitized before using?			
Is storage facility well maintained and clean, with designated areas for food products and non-food items?			
Is transport vehicle well maintained and clean, with designated areas for food products and non-food items?			
Are products kept cool during storage and transport?			
Are workers trained in safe food handling practices?			
Are workers instructed not to work if they exhibit signs of infection (e.g., fever, diarrhea, etc.)?			





# Ensuring Traceability of Fresh Produce

## School Nutrition Responsibilities

In the event that produce purchased for your school nutrition program is recalled, you are responsible for tracing the produce one step back (trace back) to your supplier and one step forward (trace forward) to when and to whom it was served. Follow these tips to help you track produce in the event of a food recall:

- Maintain purchasing records for all produce. All purchasing records, typically invoices, should include lot numbers and other identifiers, such as pack date. If lot number and other critical information are not already included on the invoice, add it upon receipt.
- Maintain contact information for all suppliers, including farms, if produce is purchased directly from them.
- Label all produce so that you can identify the source and trace it back through your purchasing records. Keep produce in original packaging when possible.
- Avoid commingling produce from different sources in storage, preparation, or service.
  - ♦ If you commingle, you may not be able to identify the specific source of the produce in the event of a recall.
  - ♦ If the same product is purchased from a farm, multiple farms, or a distributor, keep the products segregated through storage and service and keep records of when each product is served.  
*Example: Apples are purchased from The Apple Farm and Distributor XYZ. Apples from The Apple Farm are stored separately and labeled clearly. The Apple Farm apples are not added to cases partially filled with apples from Distributor XYZ, or stored in empty cases that previously held apples from the distributor.*
- Document information on the menu management/production record to enable you to trace all produce items back to your purchasing records, should a recall occur. Record information about the source of the produce--a distributor, a farm, or a school garden.
- Include information on your shipping documents if produce is prepared at one location and shipped to another location for service.
- Label repacked fresh produce containers when distributing it to schools in quantities less than a full case. This practice will facilitate trace back to its original source in your purchasing records.
- Conduct a periodic mock recall of fresh produce to test your internal tracking system. Include your distributors in the mock recall to test their internal traceability program.





## Ensuring Traceability of Fresh Produce, continued

### School Gardens

- Maintain a record of all produce received from school gardens that includes product/variety name, harvest date, and all persons involved in harvesting.
- Serve small quantities of produce from school gardens or a local farm to specific classes or grades to facilitate trace back. Do not commingle.

*Example: Do not mix lettuce from a local farm with lettuce from a local distributor during salad preparation.*

### Distributor Responsibilities

- Bids or procurement documents with distributors should include selection criteria to ensure the safety and traceability of fresh produce purchased by your school district. The distributor should meet the following criteria:
- Maintain records that are in compliance with the U.S. Bioterrorism Act of 2002. These records can be used to trace fresh produce one step back and one step forward. The following information should be recorded for each produce item:
  - ♦ Supplier identity and contact information
  - ♦ Batch and lot number(s) for all produce items as they are received at the distribution facility and as they are shipped to customers. All produce that is repacked or has lot numbers changed must be traceable back to the original source.
  - ♦ Shipment dates when produce was received at the distribution facility, and when it was shipped to specific customers.
  - ♦ Contact information for all customers who receive produce.
- Ensure that any suppliers, such as packing houses and/or cooperatives, can trace back to the grower(s) in the event of a recall.
- Maintain audit documentation of Good Agricultural Practices from growers, or farms, if applicable.

### Farm and Produce Cooperative Responsibilities

Farmers are responsible for tracing product back to the specific field where it was grown. If produce cooperatives receive produce from multiple farms, they should keep records that allow traceback to specific produce from each grower to specific customers. Records typically include:

- |                        |                    |
|------------------------|--------------------|
| • Harvest date         | • Packing date     |
| • Field identification | • Shipping date    |
| • Harvesting personnel | • Customer records |



## Ensuring Traceability of Fresh Produce, continued

### References

FDA, *Guidance for Industry: Guide to Minimize Microbial Food Safety Hazards for Fresh Fruits and Vegetables*, 1998

<http://www.fda.gov/Food/GuidanceComplianceRegulatoryInformation/GuidanceDocuments/Produceand-PlanProducts/UCM064574>

FDA, *Guidance for Industry: Guide to Minimize Microbial Food Safety Hazards of Fresh-cut Fruits and Vegetables*, 2008

<http://www.fda.gov/Food/GuidanceComplianceRegulatoryInformation/GuidanceDocuments/Produceand-PlanProducts/UCM064458#ch10>

Institute of Food Technologists, *Product Tracing in Food Systems; Executive Summary*, 2009.

<http://www.ift.org/knowledge-center/focus-areas/food-safety-and-defense/~media/Knowledge%20Center/Focus%20Areas/Traceability/ExecutiveSummary.pdf>

The Produce Traceability Initiative: <http://www.producetraceability.org/>





# Washington Grown Produce Basics Chart

Vegetable (A-G)	Refrigeration	Storage Temperature (°F)	Section of refrigerator	Ethylene production	Ethylene sensitive	Relative Humidity (%)	Length of Storage
Artichoke	Yes	32-36	Back	Low	Low	95	< 3 weeks
Arugula	Yes	32-36	Back	Low	High	95	2-3 days
Asparagus	Yes	32-36	Back	Very low	Medium	95-100	2-3 weeks
Beans, green/yellow/purple	Yes	40-45	Front	Low	Medium	90-95	7-10 days
Beets, root	Yes	32	Back	Very low	Low	95-100	Bunched: 10-14 days Topped: 4-6 months
Beet greens	Yes	32	Back	Very low	Medium	90-95	10-14 days
Bok Choy	Yes	32-41	Back	Very low	Medium	95	1 week
Broccoli	Yes	32	Back	Very low	High	95	10-14 days
Brussels sprouts	Yes	32-36	Back	Low	High	95	3-5 weeks
Cabbages	Yes	32	Back	Very low	High	95	Early harvest: 3-6 weeks Late harvest: 3-4 months Napa cabbage: 1-2 months
Carrots	Yes	32	Back	Very low	High	95	Bunched: 2 weeks Mature: 4-5 months Immature: 4-6 weeks
Cauliflower	Yes	32	Back	Low	High	95	2-4 weeks
Celeriac (Celery root)	Yes	32-36	Back	Low	Low	95	3-4 months
Celery	Yes	32	Back	Very low	Medium	95	2-3 months
Chards	Yes	32	Back	Very low	High	90-95	10-14 days
Chard, swiss	Yes	32-36	Back	Low	Low	90-95	10-14 days
Chicory	Yes	32-36	Back	Low	High	90-95	
Collard greens	Yes	32	Back	Very low	High	95	10-14 days
Corn, sweet	Yes	32	Back	Very low	Low	95	4-8 days
Cucumbers	Yes	45-50	Front	Low	High	95	10-14 days
Eggplants	Yes	45-50	Front	Low	Medium	90	1 week
Endive	Yes	32-36	Back	Low	High	95	2-3 weeks
Escarole	Yes	32-36	Back	Low	High	95	2-3 weeks
Garlic	Yes	32-36	Back	Very low	Low	65-70	6-7 months Shorter periods if stored at 55-70°F
Green onions	Yes	32	Back	Very low	High	> 98	1 month

Vegetable (K-Z)	Refrigeration	Storage Temperature (°F)	Section of refrigerator	Ethylene production	Ethylene sensitive	Relative Humidity (%)	Length of Storage
Kale	Yes	32	Back	Very low	High	95	10-14 days
Kohlrabi	Yes	32	Back	Very low	Low	90-95	2-3 months
Leeks	Yes	32	Back	Very low	Medium	95	1-3 months
Lettuce	Yes	32	Back	Very low	High	95	2-3 weeks
Mushrooms	Yes	32-36	Back	Very low	Medium	95-98	5-7 days
Mustard green	Yes	32-36	Back	Low	High	90-95	10-14 days
Onions, storage	Yes	32-36	Back	Very low	High	65-70	6-7 months
Parsnips	Yes	32	Back	Very low	Low	95	2-6 months
Peas, snap/snow/sweet	Yes	32-36	Back	Low	High	90-95	1-3 weeks
Peppers, sweet	Yes	45-50	Front	Low	Low	95	2-3 weeks
Peppers, hot	Yes	45-50	Front	Low	Medium	60-65	6 months
Potatoes, early crop	No	55-65	-	Very low	Medium	90	1-3 weeks
Potatoes, late crop	Yes	40-45	Front	Very low	Medium	90	4-9 months
Pumpkin	No	55-59	-	Low	Medium	70-75	2-3 months
Radicchio	Yes	32-36	Back	Low	Low	95	2-3 weeks
Radishes	Yes	32-36	Back	Low	Low	95	Spring: 3-4 weeks Winter: 2-4 months
Rapini (Broccoli Rabe)	Yes	32-36	Back	Low	High	95	1 week
Rhubarb	Yes	32-36	Back	Low	Low	95	2-4 weeks
Rutabagas	Yes	32-36	Back	Low	Low	95	2-4 months
Salad mixes	Yes	32-35	Back	Low	Medium	90-95	4-7 days
Spinach	Yes	32	Back	Very low	High	95	10-14 days
Squash, summer	Yes	41-50	Front	Low	Medium	95	4-7days
Squash, winter	No	55-59	-	Low	Medium	50-60	2-6 months
Sunchokes	Yes	32	Back	Low	Low	90-95	4-5 months
Sweet potatoes	No	55-59	-	Very low	Low	80-85	4-6 months
Tomatillos	Yes	45-50	Front	Low	Medium	80-90	1 week
Tomatoes, ripen	No	45-50	-	High	Low	90	4-7 days
Tomatoes, mature green	No	55-60	-	Medium	High	90	1-3 weeks
Turnip	Yes	32-36	Back	Low	Low	95	4-5 months
Turnip greens	Yes	32-36	Back	Low	High	90-95	10-14 days

Fruit	Refrigeration	Storage Temperature (°F)	Section of refrigerator	Ethylene production	Ethylene sensitive	Relative Humidity (%)	Length of Storage
Apples	Yes	30-32	Back	Very high	High	90	2-6 months
Apricots	Yes	30-32	Back	High	High	90	1-3 weeks
Asian pears	Yes	30-32	Back	High	High	90-95	2-7 months
Berries	Yes	31-32	Back	Low	Low	90-95	3-7 days
Cherries, sweet	Yes	32	Back	Very low	Low	90-95	2-3 weeks
Currants	Yes	32-36	Back	Very low	Low	95	1-2 weeks
Grapes	Yes	31-32	Back	Very low	Low	90	4-6 weeks
Melon, Cantaloupe	Yes	36-41	Middle	High	Medium	90	1-2 weeks
Melon, honeydew	Yes	40-45	Front	High	Medium	90	1-2 weeks
Nectarines	Yes	31-32	Back	High	Medium	90-95	2-4 weeks
Peaches	Yes	32	Back	Medium	Medium	90-95	2-4 weeks
Pears	Yes	32	Back	High	High	95	2-7 months
Plums	Yes	32	Back	High	High	90-95	2-5 weeks
Pluots/Apriums	Yes	32	Back	High	High	90-95	2-5 weeks
Quince	Yes	32	Back	High	High	90	2-3 months
Watermelon	Yes	45-50	Front	Low	Medium	80-85	2-3 weeks

Minimally processed item	Refrigeration	Storage Temperature (°F)	Section of refrigerator	Ethylene production	Ethylene sensitive	Relative Humidity (%)	Length of Storage
Cut vegetables	Yes	32-36	Back	Low	High	90-95	1-3 days
Cut fruits	Yes	30-32	Back	High	Low	90-95	1-3 days

Herbs & Edible Flowers	Refrigeration Temperature (°F)	Section of refrigerator	Ethylene sensitive	How to Store
Herbs & flowers with stems (parsley, chive flowers etc.)	37-40	Middle	YES	Place stems in container with some water, similar to a bouquet
Leafy herbs & loose flowers (thyme, mint, nasturtiums etc.)	37-40	Middle	YES	Dampen a paper towel, loosely wrap herbs,
Basil on stem or loose leaves	52-59	Front	YES	cover with plastic wrap or place in a plastic bag

## References:

- USDA FNS & AMS, Produce Safety University, *Good Temperature Guidelines*
- University of California – Davis, Postharvest Technology – Maintaining Produce Quality & Safety, *Produce Facts in English*. Available at URL: <http://postharvest.ucdavis.edu/producefacts/>
- Public Health – Seattle & King County and Seattle Office of Economic Development. *Healthy Foods Here Produce Guide*. 2010
- *The Illustrated Cook's Book of Ingredients*. New York, NY: DK Publishing; 2010.





# Handling Fresh Produce on Salad Bars\*

**Follow these recommendations to reduce the risk of foodborne illness from salad bars or self-service lines. Follow your school district's food safety plan for appropriate actions when temperature standards are not met.**

## **Preparation and Set Up**

- Use equipment with food shields or sneeze guards. In elementary schools, equipment with a solid barrier between the students and the food is recommended.\*\*
- Consider offering pre-packaged or pre-portioned items for students in all grades. In elementary schools, pre-packaged or pre-portioned items are recommended for all self-service items.\*\*
- Place a clean and sanitized utensil in each container on the salad bar. Replace utensils at the beginning of each meal period.
- Label containers to identify foods and condiments.
- Use dispensers or single-use packages for salad dressings and other condiments.
- Set up the salad bar just prior to serving time.
- Select container size so that food is used within one meal period.
- Provide individually wrapped eating utensils, or keep unwrapped utensils in containers with the handles up.

## **Temperature Control**

- Verify that the temperature of equipment is at 41 °F or below before use.
- Check to be sure the bottom of the pan comes into contact with the ice or ice pack, when using them for temperature control.
- Chill foods to an internal temperature of 41 °F or below before placing on the salad bar.
- Check and record internal temperatures of each food item with a clean, sanitized, and calibrated thermometer before placing it on the salad bar. Check at least every two hours to verify that it remains at or below 41 °F.

## **Supervision**

- Consider using a serving line with a solid food shield in elementary schools, allowing students to select items for assisted service rather than self-service. Employees place selected items on a plate or tray, then pass it over the food shield to students.\*\*



## Handling Fresh Produce on Salad Bars, continued

- Monitor self-service salad bar in middle and high schools to ensure that students do not:
  - ◆ Touch food with bare hands.
  - ◆ Touch food with clothing or jewelry.
  - ◆ Cough, spit, or sneeze on food.
  - ◆ Use utensils in multiple containers.
  - ◆ Place foreign objects in food.
  - ◆ Place dropped food or utensils back into containers.
  - ◆ Use the same plate or tray on subsequent trips.
- Assist students with utensils, if needed.
- Avoid adding or layering freshly prepared food on top of food already on salad bars and self-service lines. Check with your state or local health department for regulations on replenishing food.
- Use a clean cloth or towel dipped in sanitizing solution to wipe surfaces during and between meal periods. Store sanitizing solution away from salad bar.

### Clean Up

- Remove food immediately after the last meal period.
- Cover, label, date, and refrigerate food remaining at the end of service if it will be served the following day.
- Discard food that may have been contaminated, either unintentionally or intentionally.
- Use chemical sprays only after all food has been removed.

\*These best practices are based on the 2009 FDA Food Code. Follow the food code for your local or state jurisdiction. Consult with your local health department if you have any questions. [www.fda.gov/Food/FoodSafety/RetailFoodProtection/FoodCode/FoodCode2009/default.htm](http://www.fda.gov/Food/FoodSafety/RetailFoodProtection/FoodCode/FoodCode2009/default.htm)

\*\*Recommendations based on 2010 NSF International/American National Standard Institute (ANSI) Standard 2 for Food Equipment. [www.nsf.org](http://www.nsf.org)

These best practices are consistent with NFSMI's Standard Operating Procedures for Holding Hot and Cold Potentially Hazardous Foods and Preventing Contamination at Food Bars.

<http://nfsmi.org/documentlibraryfiles/PDF/20080213010741.pdf>

<http://nfsmi.org/documentlibraryfiles/PDF/20080213011044.pdf>



# Handling Fresh Produce in Classrooms\*

## Guidance for School Nutrition Staff

**Follow your school district's food safety plan for appropriate actions when temperature standards are not met.**

- Wash hands thoroughly with soap and water prior to handling or serving fresh fruits and vegetables to students.\*\*
- Pre-package cut produce into single-serve, closed or covered containers or individually sealed bags.
- Consider packaging whole produce, such as oranges, apples, plums, etc, in bags or wrap.
- Provide condiments, such as ranch or yogurt dip, in single-serve portions to minimize cross-contamination.
- Provide wrapped, disposable utensils to students, if needed.
- Deliver produce to classrooms immediately prior to service.
- Use a clean, sanitized, and calibrated thermometer to check food temperatures. Cut produce should be 41°F or below. Record produce temperatures when delivered to the classroom.
- Use coolers with ice, ice packs, or mobile refrigerated carts to keep produce cold if holding it in classrooms prior to service.
- Return to classrooms to pick up leftover produce after service.
- Discard all leftover cut produce, such as veggie sticks, sliced apples, sliced oranges, or melon.
- Wash all leftover unpackaged whole produce, such as apples or pears, if serving it again.
- Train classroom teachers and staff at the beginning of each school year about hand-washing, controlling time/temperature, and preventing cross contamination.

\*These best practices are based on the 2009 FDA Food Code. Follow the food code for your local or state jurisdiction. Consult with your local health department if you have any questions. [www.fda.gov/Food/FoodSafety/RetailFoodProtection/FoodCode/FoodCode2009/default.htm](http://www.fda.gov/Food/FoodSafety/RetailFoodProtection/FoodCode/FoodCode2009/default.htm)

\*\*For hand washing information refer to the National Food Service Management Institute's resource, *Wash Your Hands: Educating the School Community*: [www.nfsmi-web01.nfsmi.olemiss.edu/ResourceOverview.aspx?ID=118](http://www.nfsmi-web01.nfsmi.olemiss.edu/ResourceOverview.aspx?ID=118)





# Handling Fresh Produce in Classrooms, continued

## Guidance for Teachers and Aids

- Wash hands thoroughly with soap and water prior to handling or serving fresh fruits and vegetables to students.\*
- Allow time for students to wash their hands with soap and water prior to eating fresh produce, if possible.
- Use hand sanitizers if soap and water are not available. Hand sanitizers alone kill most, but not all, harmful microorganisms.
- Keep produce cold, or serve produce as soon as possible after it is delivered to the classroom.
- Do not serve any cut produce that has been held at room temperature for more than 2 hours or above 90 °F for more than one hour.\*\*
- Distribute produce or allow students to select pre-packaged produce to minimize potential contamination.
- Discard all leftover fresh-cut produce, such as veggie sticks, sliced apples, sliced oranges, or melon.

\*For hand washing information refer to the National Food Service Management Institute's resource, *Wash Your Hands: Educating the School Community*: [www.nfsmi-web01.nfsmi.olemiss.edu/ResourceOverview.aspx?ID=118](http://www.nfsmi-web01.nfsmi.olemiss.edu/ResourceOverview.aspx?ID=118)

\*\*Source: The Partnership for Food Safety Education. [www.fightbac.org/safe-food-handling/chill](http://www.fightbac.org/safe-food-handling/chill)





# Food Safety Tips for School Gardens

Schools across the nation are using gardens to help children discover where food comes from and to develop healthy eating habits. Gardens provide a way for children to grow, harvest, prepare, and ultimately taste new fruits and vegetables. When appropriate precautions are taken fruits and vegetables from school gardens can be served safely to students. Before starting a school garden, check with your local health department about their policies on serving food grown in gardens in school meals.

Potential food safety risks should be taken seriously. Produce grown in gardens can be contaminated during growth, harvest, transportation, preparation, or service and result in foodborne illness. The practices addressed in this document will help program operators enhance the safety of fruits and vegetables grown in school gardens.

Produce grown in school gardens may also be served in classrooms. These food safety tips are also applicable for produce served in classrooms. For additional tips, see *Handling Fresh Produce in Classrooms*.

## Site Selection, Materials, and Water Use

- Locate gardens away from potential contamination sources (garbage, utilities, animals, water runoff, flooding, septic systems, etc.).
- Contact the utility companies or call 811, the national "Call Before You Dig" number, a few days before digging to ensure that you avoid gas or electric lines.
- Identify soil history from all sources. Have soil tested to determine levels of contaminants such as chemicals, pesticides, lead, etc., especially if located near high-traffic zones. Contact your local Cooperative Extension Office for information on soil testing services available in your area.
- Create reasonable barriers to keep wild animals away from the garden. Examples include fencing or cages over produce items such as strawberries, leafy greens, etc.
- Consider purchasing soil that has been commercially packaged and labeled for growing food crops. Soil purchased from a commercial source ensures traceability.
- Use non-toxic, non-leaching materials for raised-bed gardens, containers, stakes, or trellises. Do not use pressure-treated wood, used tires, single use plastics, old railroad ties, etc.
- Select non-allergenic and non-toxic plants. Check with your local Cooperative Extension office if you need assistance determining plant safety or toxicity.





## Food Safety Tips for School Gardens, continued

- Test all water sources annually, except municipal sources, for potentially harmful organisms, such as fecal coliforms, to make sure they meet the standards of the Environmental Protection Agency (EPA). Test water collected in cisterns. Contact your local Cooperative Extension Office for assistance.
- Maintain water testing records.
- Use food grade containers to transport water.

### Chemical and Fertilizer Use

- Do not use any pesticides or herbicides due to potential health hazards to children.
- Check with your county Cooperative Extension Office for the best non-chemical method of control for local pest problems.
- Read and follow the manufacturer's instructions when using fertilizer.
- Secure all fertilizers in a safe and locked location when not in use.
- Allow only adults to handle fertilizers.
- Check with your local health department about applicable Occupational Health and Safety Administration (OSHA) hazard communication requirements. Maintain Material Safety Data Sheets (MSDS) as required. More information is available at: <http://www.osha.gov/dsg/hazcom/index.html>.
- Maintain information on safe use and potential hazards that is available on product labels or from the manufacturer, for all fertilizers.
- Label the container with the common name of the fertilizer if transferring fertilizers into a dispensing container. Never use a food container.
- Dispose of fertilizer and its containers according to the manufacturer's instructions.

### Compost and Manure Use

Composting is a highly complex process that requires strict attention to specific procedures and conditions. This fact sheet summarizes key points, but is not comprehensive. Contact your local Cooperative Extension Office, or a composting expert for assistance.

- Avoid the use of raw manure, as it may increase the risk of contamination from pathogens.
- Use of composting manure in school gardens is not recommended due to increased risk of contamination from pathogens that are not completely destroyed. Contact your Cooperative Extension Office to ensure that proper procedures are followed if you plan to compost manure for a school garden.
- Consider purchasing traceable, commercially prepared compost, if manure-based compost is desired.
- Consider using worms to form vermicompost. Learn about vermicomposting at: <http://www.bae.ncsu.edu/topic/vermicomposting/>.



## Food Safety Tips for School Gardens, continued

- Add only plant products, such as fresh fruit and vegetable culls from food production (apple and pear cores and vegetable trimmings), to a school compost pile. Other plant material, such as grass clippings, leaves, and twigs also can be added to fruit and vegetable clippings.
- Do not use animal products, animal waste, or any cafeteria waste in a compost pile, as it might contain animal products. Harmful pathogens might be introduced through animal products and must be properly managed to ensure their destruction.
- Wear gloves when handling compost material.
- Locate the compost pile in a secure location away from potential contamination, such as garbage, water runoff, etc. Restrict access by animals as much as possible.



### Growing and Harvesting Produce

A school garden provides an opportunity for children and volunteers to learn about how to handle food safely. The following are some food safety tips to follow when growing and harvesting produce.

- Ensure that all persons, including staff, students, and volunteers receive basic food and gardening safety training instructions according to local health regulations. The following topics are recommended:
  - ◆ Handwashing and personal hygiene
  - ◆ Cleaning and sanitizing garden equipment and containers used to hold produce
  - ◆ Handling produce during harvest, washing, and transportation
  - ◆ Glove use
- Ensure that volunteers are covered by the school district insurance policy in the event of accident or injury.
- Require signed permission slips for all student gardeners. Permission slips should list potential hazards of working in a school garden and identify any allergies the child may have.
- Do not allow anyone to work in the garden while sick, or until 24 hours after symptoms, such as vomiting or diarrhea, have subsided.
- Ensure that all harvesters wash hands thoroughly in warm, soapy water for at least 10 to 15 seconds, and then rinse with potable water. Ensure that all open cuts or wounds on hands, arms, or legs are properly covered prior to participating in the harvest.
- Require harvesters to wear closed-toed shoes to prevent cuts, stings, or other injuries.
- Consider using single-use disposable gloves when harvesting, or handling, fresh produce as an extra precaution.
- Harvest the garden regularly and remove any rotten produce.



## Food Safety Tips for School Gardens, continued

- Use cleaned and sanitized food grade containers, such as plastic bins or buckets, to hold harvested produce. Do not use garbage bags, garbage cans, and any container that originally held chemicals. These types of containers are made from materials that are not intended for food use.
- Clean harvesting tools, such as knives, scissors, etc., with soap and potable water immediately before and after each gardening session.

### Using School Garden Produce in your School Meal Program

- Check with your local health department to ensure that local regulations permit food from gardens to be served as part of school meals.
- If the harvest from the school garden will be used in the school meals program, the school garden coordinator should work cooperatively with the school nutrition director to plan and implement the garden.
- Discuss food safety practices in the garden with school garden coordinators. Consider asking gardeners to document their practices. Use the information in this document as a guide to identify appropriate practices.
- Accept produce harvested from school gardens only when school nutrition staff is present to receive it. All produce dropped off or left when staff is not present should not be used in the school meal programs.
- See Best Practices: *Handling Fresh Produce in Schools* for guidelines on receiving, storage, preparation, and service of fresh produce in schools.
- Reject produce that does not meet school nutrition program standards.
- Receive and inspect produce harvested from school gardens according to the same procedures used to inspect produce from the district's distributors.
- Do not use any produce that has been noticeably contaminated by animals or insects.
- Refrigerate garden produce immediately, unless the particular item is normally held at room temperature.
- Store, prepare, and serve school garden produce separately from other sources of produce to maintain traceability.
- Document service of school garden produce on the menu management/ food production record. See *Ensuring Traceability of Fresh Produce* for more information.
- Ensure that liability for a potential foodborne illness caused by produce grown in school gardens is covered by your school district.







## Food Safety Tips for School Gardens, continued

### Addressing Community Donations

Members of your local community, or staff or faculty at your school(s) may want to donate produce grown in private or community gardens to your school meal programs or to your school(s). Although their intentions are good, these products must be safe and of acceptable quality to serve in your school meals program. Before accepting donations, ensure that donated produce food safety practices have been followed to grow, handle, and transport the produce.

- Check all local and state health regulations regarding receiving community donations before you accept these products.
- Provide information to community members about USDA policies and regulations for school meal programs and state and local health requirements that you must follow. Address questions in a positive manner.
- Determine whether your school district has liability insurance to cover any food safety issues that may result from produce received from private or community gardens. These entities typically do not carry product liability insurance for potential food safety risks.
- Develop guidelines and expectations for growing and handling practices for any fruits or vegetables used in your schools. Share this information with individuals or groups who are interested in donating produce to your schools.
- Visit any gardens that supply produce to your school foodservice program to evaluate food safety practices. Discuss the practices in this document with gardeners. (See *Verifying On-Farm Food Safety* for additional information)
- Only accept donations that are dropped off when a school nutrition staff member is present to receive them.
- Conduct a visual inspection of any vehicle used to transport produce to a school to assess whether it is clean. A vehicle should not be used to transport fresh produce if it is also used to transport live animals.
- Rotten or damaged produce should not be accepted.





## Food Safety Tips for School Gardens, continued

### Resources

Verifying On-Farm Food Safety

Ensuring Traceability of Fresh Produce

Best Practices: Handling Fresh Produce in Schools

Handling Fresh Produce in Classrooms

Healthy School Meals Resource System School Gardens and Farm to School Resources:

[http://healthymeals.nal.usda.gov/nal\\_display/index.php?info\\_center=14&tax\\_level=2&tax\\_subject=526&level3\\_id=0&level4\\_id=0&level5\\_id=0&topic\\_id=2314&&placement\\_default=0](http://healthymeals.nal.usda.gov/nal_display/index.php?info_center=14&tax_level=2&tax_subject=526&level3_id=0&level4_id=0&level5_id=0&topic_id=2314&&placement_default=0)

National Gardening Association, [www.kidgardening.org](http://www.kidgardening.org)

Garden to Table: Five steps to food safe fruit and vegetable home gardening. University of Rhode Island, Connecticut, Maine, New Hampshire and Vermont. <http://www.sde.ct.gov/sde/LIB/sde/pdf/DEPS/Nutrition/OPmemos/10/5stepsOM1010.pdf>

Grow It Healthy, University of Maryland Extension, [www.growit.umd.edu](http://www.growit.umd.edu)

Safety in the garden, California, <http://www.cde.ca.gov/ls/nu/he/gardensafety.asp>

Bucklin-Sporer, A. & Pringle, R.K. (2010). *How to grow a school garden: A complete guide for parents and teachers*. Portland, OR: Timber Press, Inc.

McGrath, M. (2006). *Book of Compost*. New York: Sterling Publishing Company, Inc.

**Note:** USDA's Food and Nutrition Service has addressed questions regarding the operation of a school garden in Memo SP 32-2009, dated July 29, 2009: [http://www.fns.usda.gov/cnd/governance/Policy-Memos/2009/SP\\_32-2009\\_os.pdf](http://www.fns.usda.gov/cnd/governance/Policy-Memos/2009/SP_32-2009_os.pdf).

While this policy memo outlines how school food authorities may operate or purchase foods from school gardens, school nutrition programs are not required to grow or use any produce from school gardens.

## Serving Foods Grown in School Gardens

Produce grown in school gardens approved by PPS Facilities and Asset Management Department (PPS FAM) may be served to students using the following safe food handling procedures to reduce the risk of harmful bacteria:

- ☐ All persons harvesting produce will use proper hand washing techniques before and after handling fresh produce.
- ☐ Excess dirt and leaves will be removed from produce in the garden area before using the school cafeteria food preparation sinks.
- ☐ Harvested produce will be promptly refrigerated or kept on ice in a cooler for safe transport after picking.
- ☐ All food-contact surfaces, equipment and utensils such as cutting boards, knives and sinks that are used in the preparation of harvested produce will be washed, rinsed, sanitized and air-dried in the school cafeteria kitchen under the guidance of a certified food handler.
- ☐ Wash hands and surfaces often before and during food preparation. Do not cross contaminate clean surfaces with unwashed produce.
- ☐ Fresh produce will be washed vigorously under cold running water in a sink that has been cleaned and sanitized. Do not use detergent or soap to wash vegetables or fruit.
- ☐ Firm vegetables or fruits with a hard surface should be scrubbed. Softer vegetables and fruits should be gently rubbed and turned while holding under running water.
- ☐ Wash all whole fruits and vegetables even if the skin or rind will not be eaten to prevent pathogens from being transferred to the edible part when it is cut.
- ☐ Remove the outer leaves of lettuce and cabbage before washing.
- ☐ Remove damaged or bruised areas of the vegetables and fruits and discard.
- ☐ Label, date and refrigerate any cut fruits and vegetables within two hours of peeling or cutting.
- ☐ Discard any cut fresh produce that has been left at room temperature for more than two hours.

**PPS Nutrition Services should be contacted at least one week in advance to arrange for use of kitchen to prepare produce as described above.**





## **Ventura Unified School District Child Nutrition Services**

Serving produce grown in the school garden in the cafeteria.

### **Program Summary**

School gardens give our children the opportunity to grow their own fruits and vegetables. Students that grow their own produce have a greater appreciation and are more excited about eating the produce they have harvested themselves. Gardening is a skill children can use for the rest of their lives that promotes better health and wellness.

Ventura Unified School District has a garden in all 17 elementary schools. As a district, we promote the farm to school program through which we purchase and feature locally grown fresh produce in all of our cafeterias. To promote our school gardens, we needed to develop a procedure on how our students could harvest the produce grown in the school gardens and then serve it in the cafeteria.

At all of our school sites, we feature a farm fresh salad bar every day. A procedure was developed to incorporate the produce harvested in the school gardens by the students and then served on the salad bars and in the cafeterias.

### **Procedure**

1. The garden coordinator meets with the salad bar coordinator and the cafeteria manager to discuss and coordinate the produce ready to be harvested in their school gardens.
2. The salad bar coordinator then advertises and promote the school's harvest in the cafeteria and the classroom. When possible, posters are made to display in the cafeteria of what the item will be. E-mails are sent to the teachers asking them to tell their students what was harvested in the garden, and when it will be served in the cafeteria. This helps generate enthusiasm amongst the students.
3. The teacher, garden coordinator and students harvest the produce.
4. They then pre-rinse the produce before it is sent to the cafeteria.
5. The produce is sent to the cafeteria where the staff will wash and prepare the fruits and vegetables harvested for the salad bars.
6. The produce is served on the salad bar or on the cafeteria line depending on the item and the quantity that was harvested from the garden.
7. The salad bar coordinator, the cafeteria staff, and the faculty encourage the students to sample the produce.
8. The excess will be used in the school compost.



## Other considerations and recommendations

Those planning and planting the school garden should review your school's rules and regulations. Some plants that can cause serious allergic reactions may be prohibited.

If the garden is near parking areas or other high-traffic zones, consider testing for contaminants before growing fruits and vegetables. Many states have agriculture extension services that can help with this. If building a raised-bed garden, consider purchasing soil meant for food production from an established retail entity to ensure soil safety and traceability.

If your school has a composting program for cafeteria waste, use the resulting compost for flowers, ornamental plants and trees rather than for garden beds where food is grown. Compost that comes from garden waste can be applied to food-growing beds if deemed appropriate by the school garden supervisor and/or compost coordinator.

Be sure to coordinate with school grounds-keeping or custodial staff about your garden's goals, protocols and maintenance plan. If you are concerned about the presence of pesticides on or near your garden, be sure to communicate that, too. Consider using your school garden as an educational tool that can teach students about food safety procedures and incorporate curricula that teach to these issues in your garden educational plan.

Be sure that your school garden program is aligned with any relevant school district policies including, but not limited to, wellness policies, school procedures for receiving gifts and donations, working with parent and community volunteers, and liability policies.

*"Last week we had a salad with lettuce from the greenhouse. It was amazing to know that we had grown some of that food...if I hadn't done this in school I never would have done this. I'm glad that I did." 8th Grader*

These best practices were created as a collaborative effort among school garden practitioners from across the country. Thanks to Kelly Erwin, Deb Habis, Tegan Hagy, Noli Hoyer, Dana Hudson, Marion Kalb, Emily Jackson, Catherine Sands, and Amy Winston. This was created with the support of the National Farm to School Network [www.farmtoschool.org](http://www.farmtoschool.org)

## Fresh, Healthy, and Safe Food: Best Practices for Using Produce from School Gardens

School Gardens serve as exciting living laboratories and are an important component of Farm to School efforts. The bounty from school gardens can contribute to the school cafeteria, students' families, or be used in classroom and afterschool taste-testing activities.



The following practices are intended to provide basic food safety guidelines for those involved with school gardens. They include principles from Good Agricultural Practices and safe food handling procedures and are intended to serve as a framework that may easily be adapted to meet individual school settings and regional requirements. The safety benefits of fresh food grown on site include the avoidance of potential contamination that accompanies long-distance travel (where products frequently change hands) and control over the supply chain direct from garden to table.

Safe handling information should be provided to students, teachers, and others involved in growing, harvesting, and preparing. In addition to the many benefits of fresh food, healthy activity, and learning, your school garden can be an educational tool that helps teach students about food safety procedures.

*"We were able to plant the spinach and then we ate the spinach and that was really great." 1st Grader*



*"Between the excitement introduced into the curriculum, the nutritional benefits, the hands on sense of accomplishment and the sense of pride, the school has never had such a wonderful opportunity to integrate learning and connect it to real life." Teacher*

## Growing Practices

All organic matter should be fully composted in aerobic conditions and at high temperatures prior to application. Avoid raw manure and limit composted manure to what can be purchased from a commercial outlet to ensure traceability.

When using water for irrigation make sure it is potable and from a tested source. Check with your state cooperative extension or state health offices for simple testing kits.

If soil used for growing is coming from school property, test for contaminants before planting. Testing kits are usually available through your state same as water testing above.

There are many places to purchase seeds for your school garden, so be conscious of where your seeds come from and consider source and quality. Look for those that are preferably non-genetically modified, and come from companies that have taken a "safe seed pledge."

No synthetic pesticides or herbicides should be used, preventing toxic residue on food and avoiding human and environmental exposure to pesticides.

Materials used for garden beds, containers, stakes or trellises should be constructed of non-toxic, non-leaching material (no pressure treated wood or used tires).



## Harvesting and Handling

Students, staff, parents or volunteers involved in harvesting should wash hands thoroughly in warm soapy water for at least 20 seconds prior to harvesting. Anyone with open cuts or wounds on their extremities should not participate in harvest until they have healed.

All harvesting tools--scissors, bowls, tubs--should be food-grade and/or food service approved and designated solely for harvest and food handling. The tools should be cleaned regularly with hot water and soap, then dried.

School Garden produce delivered for use in a school cafeteria should be received and inspected by food service personnel upon delivery with the same system used to receive and inspect all other incoming products.

If storage is necessary, produce should be cooled and refrigerated promptly after harvest. Temperatures vary on type of produce being harvested; specific post-harvest storage and transportation temperatures can be found at

<http://postharvest.ucdavis.edu/produce/storage/index.shtml>

School Garden produce should be washed according to the same standards that the cafeteria has in place for conventionally received produce. A person with ServSafe or comparable food-safety certification should supervise students, parents, or staff who participate in any food preparation--i.e., taste-testings or special cafeteria events.

## Food Safety in the School Garden

A school garden can be used for growing tasty and nutritious vegetables, fruits, and herbs, and for teaching youth valuable life skills. An edible school garden can serve as an engaging classroom for attaining a wide range of educational goals, such as learning about math, science, and health. Working in a garden also provides fun, recreation, and exercise, and gives children a first-hand look at the wonders of nature.

School gardens are generally safe, healthy, and enjoyable environments, but it is important to keep safety in mind when children are in the garden or consuming the fruits of their labor. Whether a school gardening program includes a large in-ground garden or simple containers for growing herbs, certain precautions must be followed to avoid potential hazards in the garden – such as insect bites, poison ivy, sunburn, or metal garden tools – and to keep food that is grown safe and wholesome.

Thousands of people in the U.S. become ill each year from eating commercially grown fresh vegetables and fruits that are contaminated with pathogenic (disease-causing) microorganisms. In fact, more foodborne illness outbreaks are linked to fresh produce than to meat or poultry. Bacteria such as Salmonella and E. coli O157:H7 cause foodborne illnesses. Contamination occurs when food crops come in direct contact with these or other pathogenic microorganisms from animal droppings, human waste, polluted water, contaminated equipment or utensils, or other sources. Fortunately, the risk of developing a foodborne illness can be minimized. This fact sheet presents common-sense guidelines for the safe handling of foods grown in school gardens, keeping foods free from pathogens, and maintaining a safe environment for children and teachers working in the garden.

### Select the garden site carefully

- Locate the garden away from wells, septic systems, in-ground tanks, and dumpsters.
- Avoid areas where water collects. Vegetables and herbs will not grow well in poorly drained soils that have standing water after rainfall.
- Choose a level site. Sloped ground can lead to soil erosion and nutrient run-off.
- To avoid damaging underground pipelines or wires, contact “Miss Utility” (1-800-257-7777) before digging in the soil.
- Contact the local school system facilities planning department before starting a garden for any other site considerations.



## Soil and compost safety

- Soils can contain lead, which is toxic to the nervous system. It is important to minimize the exposure to lead, especially among children who are most affected by it.
  - Test the soil for lead regardless of your location. All soils will have a natural, background level between 5 ppm and 40 ppm. Do not locate school gardens in an area where the total estimated lead level is above 300 ppm.
  - Lead can be absorbed into plant tissue, but the greatest exposure occurs when contaminated soil dust is inhaled, when contaminated soil is ingested by young children, and when soil particles containing lead adhere to garden produce that is later consumed.
  - Information about lead is found in fact sheets HG#18 and HG#110 listed under “Resources” at the end of this fact sheet. (Note: An example of a soil lead test is the one offered by the University of Massachusetts – contact information is on the last page of HG #110- see “Resources” below).
- Compost improves soil quality and should be added every year with these recommendations:
  - It is a good idea to wear gloves when handling compost. Whether or not students wear gloves, they should always wash their hands after handling compost. Use a fingernail brush to remove particles trapped under the nails.
  - Do not add any farm manure or pet waste to compost bins or garden soil. Animal manures contain human pathogens that can contaminate vegetable crops. Commercial manure products (composted or dried at high temperatures) are safe to use in school gardens. Blood meal and dried blood are commercial garden products that are safe to use as a natural fertilizer or animal repellent.
  - Items that can be safely composted include vegetable peelings, leaves, grass, and shredded paper.

## Know your water source

- Be familiar with the quality and safety of the water source you use in your garden. If you get your water from a municipal or public water system, it is probably safe and drinkable. Check with your school system or water company if you are not sure about potability.
- If your school uses well water, have the water tested at least once a year to make sure it meets the Environmental Protection Agency standards.

## Working in the garden

- Students should not eat anything from the garden unless they are sure it is an actual food. Students should check with an adult if they are not sure.
- Students should learn which plants have both edible and poisonous parts. For example, only the tomato and not the tomato leaves should be eaten.
- Have all parents sign permission slips that list potential hazards and that allow students to work in the garden. Record all allergies, including food and insect, and provide a first aid kit and drinking water.
- Students should wear proper shoes to protect their feet from cuts and stings. Bare feet, sandals, or flip flops should not be allowed.
- Students should be encouraged to wear hats while gardening, and to apply sunscreen to exposed skin if they expect to be in the garden for more than 15 minutes.
- Students should be encouraged to walk on pathways when available.
- Students should wash their hands thoroughly after returning from the garden, using a clean nail brush.
- Be aware that exposure to the sap, leaves, and stems of certain plants (such as squash or tomatoes) can cause mild skin irritation or contact dermatitis in sensitive individuals.

## **Insects and pest management**

- No synthetic herbicides, fungicides, or insecticides (with the exception of mosquito repellent) should be used in the garden, or within 25 feet of the garden.
- There are hundreds of species of insects living naturally on school grounds. The vast majority are benign or beneficial ones that pollinate crops or attack other insect pests. The small minority that feed on vegetable crops can usually be controlled successfully using organic pest management techniques.
- Weeds are controlled with mulches, hand-pulling, and weeding implements – not with herbicides.

## **Wildlife**

- Deer, rabbits, and groundhogs can devastate vegetable gardens. Birds, squirrels, mice, and raccoons can also become troublesome pests. If possible, secure permission, funding, and assistance to erect a fence with a gate. If deer are a problem, the fence needs to be 8 ft. tall. If deer are not a problem, a 4 ft. high fence will suffice. Many types of woven wire and vinyl netting fencing materials are available. A fence will reduce injury to crops, and the risk of harvesting contaminated crops (animal droppings are a potential source of pathogens that cause foodborne illnesses).
- Harvest produce regularly and pick up and remove rotting vegetables.
- Don't feed birds near your garden. Wild bird feed can attract rodents. Don't leave standing water in or near the garden. Mosquito larvae thrive in small amounts of stagnant water.
- Restrict nesting and hiding places for rats and mice by mowing the grass or other vegetation at the edges of your garden.
- Cover the ends of stakes and posts with plastic or metal cones to keep birds from resting and defecating in or near the garden.

## **Tools and materials**

- Closely monitor students using sharp tools, such as spades, trowels, clippers, and scissors. Identify which tools are for adult use only.
- Instruct students using tools to stay an arm's length plus the tool length away from the next person.
- No tools should be held above waist level.
- Students should not run or play around while holding tools.
- All long-handle tools should be leaned against a wall or fence when not in use. Never lay a metal rake on the ground.
- Some gardening materials – such as lime, fertilizers, and soilless growing media – may be dusty when poured or applied to the garden. Handling and using these materials should be reserved for older students and adults who are equipped with a dust mask. Wetting the material before use will reduce dust.
- Monitor the garden for tripping hazards, especially tools and hoses.

## **Harvesting garden produce**

- Use clean containers that are made from materials designed specifically to safely hold food. Examples include paper grocery bags, 5-gallon food-grade buckets (that held pickles or other food products), colanders or plastic kitchen bowls. Plastic garbage bags, trash cans, and any containers that originally held chemicals such as household cleaners or pesticides are not food-grade.
- Wash hands before and after picking produce. Use clean gloves (that have not been used to stir compost or pull weeds) or clean hands when picking produce.

- Brush, shake or rub off any excess garden soil or debris before putting the produce into the harvest container or bringing produce into the kitchen.

### Storing garden produce

- It is not recommended to wash fruits and vegetables before refrigerating, but to wash them immediately before eating or preparing for cooking. Refrigerating fruits and vegetables with moisture from washing can encourage microbial growth.
- If you choose to wash them before storing, use cool, running tap water and be sure to dry the food thoroughly with a clean paper towel or air dry. Produce with thick skins, like potatoes, can be scrubbed with a vegetable brush to remove excess dirt and bacteria. Wash berries **immediately** before eating or cooking. Berries that are washed and then stored in the refrigerator will soon become moldy.
- If you choose to store food without washing, shake, rub or brush off any garden soil with a paper towel or soft brush while still outside. Store unwashed produce in plastic bags or containers.
- Keep fruit and vegetable bins in the refrigerator clean.
- If you store fruits and vegetables in the refrigerator, use a thermometer to check that your refrigerator is at the proper temperature (40 degrees F. or less).
- Fruits and vegetables stored at room temperature (onions, potatoes) should be kept in a cool, dry, pest-free, well-ventilated area separate from household chemicals.
- Bruised or damaged parts of fruits and vegetables should be cut away before eating or preparing. Throw moldy produce away.

### Preparing and serving fresh garden produce

- Delicious garden produce is often eaten raw so it's important to prepare raw fruits and vegetables with food safety in mind.
- Always wash hands before handling raw fruits and vegetables.
- Rinse fresh fruits and vegetables under cool, running, clean tap water even if you don't eat the skin or rind.
- Never use soap, detergent, or bleach solution to wash fruits and vegetables. These products are not meant for washing produce and may not be safe to ingest. They can also adversely affect the flavor.
- Avoid cross-contamination when preparing fruits and vegetables. Clean work surfaces, utensils, and hands before and after handling fruits and vegetables. Diluted household bleach (1 teaspoon in 4 cups of room temperature water) is safe and effective for sanitizing work surfaces. Let utensils and surfaces air dry.
- If you have leftover produce that has been cut, sliced, or cooked, store it in a clean, air-tight container in the refrigerator at 40 degrees F. or less. To be safe, do not use fresh, cut-up fruits and vegetables if they have been held longer than 2 hours at room temperature or longer than one hour at temperatures above 90 degrees F., unless you intend to cook them.

### Resources:

- University of Maryland Extension Home and Garden Information Center (for all gardening and pest questions and problems)
  - Call the "hotline": 1-800-342-2507, Mon.-Fri. 8am-1pm
  - Send an [e-mail question](#) (and photos) 24/7 through the web site: [www.hgic.umd.edu](http://www.hgic.umd.edu)
  - Click the "Publications" link to download [HG #110](#), "Selecting and Using a Soil testing Laboratory", and [HG #18](#) "Lead in Garden Soil".
- University of Maryland Extension Grow It Eat It campaign- [www.growit.umd.edu](http://www.growit.umd.edu)
- University of Maryland Extension Maryland Master Gardener Program [www.mastergardener.umd.edu](http://www.mastergardener.umd.edu)



- National GAPS (Good Agricultural Practices) Education Materials <http://www.gaps.cornell.edu/educationalmaterials.html>
- University of California, Davis – Postharvest Technology Research & Information Center. “Storing Fresh Fruits and Vegetables for Better Taste.” <http://postharvest.ucdavis.edu/datastorefiles/234-13.pdf>
- [www.foodsafety.gov](http://www.foodsafety.gov) – “Your gateway to federal food safety information.”

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**Adapted from:**

1. “Garden to Table: Five Steps to Food-Safe Fruit and Vegetable Home Gardening”, by Catherine Violette, Extension Professor and Specialist, University of New Hampshire, Cooperative Extension, Food and Nutrition (part of a grant-funded project led by the University of Rhode Island Cooperative Extension). [http://extension.unh.edu/news/2007/07/garden\\_to\\_table\\_five\\_steps\\_to.html](http://extension.unh.edu/news/2007/07/garden_to_table_five_steps_to.html)
2. “Food Safety in Your Home Vegetable Garden”, by Pamela Geisel and Donna Seaver. Publication # 8366. University of California Agriculture and Natural Resources: <http://anrcatalog.ucdavis.edu/FoodSafety/8366.aspx>
3. “Checklist for Starting a School Garden”, by Dorothy Mullen, Rutgers Extension Master Gardener- [www.suppersforsobriety.org/Documents/Garden/SchoolGardenChecklist.pdf](http://www.suppersforsobriety.org/Documents/Garden/SchoolGardenChecklist.pdf)

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**JOIN THE Grow It Eat It NETWORK!!**

**Visit our website**—find classes and events and detailed food gardening information. [www.growit.umd.edu](http://www.growit.umd.edu)

**Check out our blog**—share gardening knowledge, recipes, and experiences with other gardeners. [www.groweat.blogspot.com](http://www.groweat.blogspot.com)

**Get answers to gardening questions and problems**—call the Home and Garden Information Center hotline Mon.-Fri., 8am-1pm (1.800.342.2507). Send us e-mail questions 24/7 through the website. [www.hgic.umd.edu](http://www.hgic.umd.edu)





# Alaska School Garden Food Safety Guidelines

*This document was created in response to the need for food safety guidance in the school garden setting. School gardens are increasingly popular and interest in using the food in the school setting has been discussed in many areas of the State. This document is intended for use in any school garden where product is making its way into the schools or for any other interested gardeners. The concepts provided in this document are relevant to other gardening projects as well.*



Developed and compiled by:  
Alaska Department of Natural Resources, Division of Agriculture, Inspections Services  
& Farm to School Program  
*with input from*  
Department of Environmental Conservation  
Cooperative Extension Services  
Child Nutrition Services  
Calypso Farm and Ecology Center  
*and*  
Fairbanks School Nutrition Services



August 2011

# Product Quality Assurance

## School Garden Guidelines – Food Safety

### Guideline Details

#### A. Personal Hygiene

1. **Restrooms and hand washing facilities are available for garden workers, for use during harvest and at any time working in the garden.**
  - a. Do not use the growing field(s) as a restroom.
  - b. Hands must be washed with soap and water after eating, drinking, smoking, using chemicals in the gardening process, using the restroom, or coming into contact with any contaminant source.
2. **Proper personal hygiene practices are being followed.**
  - a. Hands should be washed frequently.
  - b. Proper clothing suitable for gardening should be worn.
  - c. School foodservice employees should follow personal hygiene practices per the school garden food safety guidelines if visiting or working in the garden(s).
  - d. Drinking, eating, and smoking should not be allowed in the garden or food storage areas.
3. **Ill persons are prevented from working and handling food.**
  - a. Workers should not be allowed to work in the garden(s) or handle raw produce if they:
    - i. have any of the following symptoms associated with an acute gastrointestinal illness such as (a) vomiting, (b) diarrhea, (c) fever, (d) jaundice, (e) sore throat with fever;
    - ii. have lesions containing pus (such as boils and infected wounds that are open and draining) on the hands, wrists and on exposed portions of the arms or other exposed body parts;
    - iii. are diagnosed with an illness due to (a) Hepatitis A virus, (b) *Shigella* spp., (c) Shiga Toxin-Producing *Escherichia Coli*, (d) *Salmonella* Typhi, (e) Norovirus, or (f) other communicable diseases transmissible through food, as required by your state, county and / or city / town public health authority.

#### B. Plot Location and Soil Treatment

1. **Growing plot is positioned so it is not in the path of runoff from industrial and agricultural areas, parking lots, roads, or other sources of potential contamination.**
  - a. Run-off from these areas can contain chemicals or dangerous pollutants that are not desirable or safe for irrigation water.
  - b. Garden should be located away from potential contamination sources such as garbage and utilities such as gas or electric.
2. **Growing plot is properly protected from domestic and/or wild animals.**
  - a. Fencing off growing areas is recommended.
  - b. Domestic pets are not allowed in or near the garden area.
  - c. The garden should be protected from the spread of waste from adjacent livestock areas, etc.
  - d. Growing areas should also be protected from people who may intentionally contaminate the area.
3. **Raised bed gardens, containers, stakes or trellises should be made of non-toxic, non-leaching material. Do not use pressure treated wood, used tires, single use plastics, old rail road ties, etc.**

# **Product Quality Assurance**

## **School Garden Guidelines – Food Safety**

### **4. Use only properly treated compost or commercially prepared compost.**

Composted plant and animal materials must be produced through a process that assures that:

- a. For in-vessel or static aerated piles, temperatures must remain at 131 degrees or above for three consecutive days.
- b. For windrow compost piles, the temperature must remain at 131 degrees or above for at least 15 days. Windrow compost should also be turned a minimum of five times during the 15 day period after remaining at 131 degrees for three consecutive days. Static piles and windrows are to be probed for temperature daily at 10- to 15- foot intervals using a variety of depths to determine whether self-heating is taking place.
- c. Untreated manure contains dangerous pathogens that can contaminate growing areas, plants, and produce. Compost of this nature can be used on non-food gardens.

More information can be found at Cornell's "Composting in Schools" website at:  
<http://compost.css.cornell.edu/schools.html>

### **5. Label instructions for the use of pesticides, soil amendments, and fertilizers are being followed. Material Safety Data Sheets (MSDS) should be maintained for all chemicals used.**

### **6. Chemicals, including fertilizers, paints, lubricants, cleaning supplies, etc, are not stored in close proximity to the garden or to harvested food.**

### **7. Food scraps / food waste is not being added to the garden soil.**

- a. Materials of this nature in the garden may introduce dangerous pathogens and may attract wild or domestic animals and insect pests.

## **C. Plants and Seeds**

### **1. Consideration should be taken when plants and/or seeds are procured in order to prevent the spread of invasive species and diseases to Alaska.**

- a. Current information about invasive species and disease control is available from the Alaska State Division of Agriculture, Plant Materials Center website:  
[www.plants.alaska.gov/](http://www.plants.alaska.gov/)
- b. Current information about inspection services and certification is available from the Alaska State Division of Agriculture, Inspection Services website:  
[http://dnr.alaska.gov/ag/ag\\_is.htm](http://dnr.alaska.gov/ag/ag_is.htm)
- c. To prevent the spread of potato Late Blight, only Certified Seed Potatoes should be used for planting potatoes.

### **2. Sprouts for harvesting are not being grown.**

- a. Due to the increasing number of illnesses associated with eating raw sprouts, the Food and Drug Administration has advised all consumers - especially children, pregnant women, the elderly, and persons with weakened immune systems - to not eat raw sprouts as a way to reduce the risk of foodborne illness.

## **D. Water and Irrigation**

### **1. Only potable water (drinking water) is being used for irrigation.**

- a. Untreated water can be a significant source of contamination.
- b. If well water is used, it must be tested according to local health authority requirements to confirm that it is appropriate for garden irrigation purposes.

### **2. Gray water, waste water, recycled water or runoff water from any source can not be used.**

- a. Water from sources of this type can contain dangerous pathogens.
- b. Non-potable water can only be used on gardens not used for food production.

### **3. Ensure that drinking water system safety meets DEC Drinking Water Program requirements and is not compromised by cross-connections (i.e. hoses/irrigation systems must have backflow preventers or air gaps).**

## **Product Quality Assurance**

# **School Garden Guidelines – Food Safety**

#### **4. If using containers to transport water, only food grade containers be used.**

- a. Containers to transport water should be food grade if water comes in contact with the plant or produce.
- b. Disposable, single use plastic containers should not be used to transport water that will come in contact with the plant or produce.

#### **E. Pesticides**

##### **1. Pesticides (Insecticides, Herbicides, Fungicides, Rodenticides) are not to be used by unauthorized personnel.**

- a. Regulations require that only licensed, certified pesticide applicators apply insecticides / pesticides in school settings.
- b. Bait-type pesticides (rodent baits, etc) shall not be used in or near the garden area. Only enclosed-type rodent traps shall be used; snap traps are not allowed.
- c. State Pesticide Regulations must be followed, including requirements for parental notification, posting of warning signs, and recordkeeping. These requirements can be found under section 18 AAC 90.625 at:  
<http://dec.alaska.gov/regulations/pdfs/18%20AAC%2090.pdf>
- d. Preference is that pesticides not be used.

#### **F. Harvest and Preparation**

##### **1. Containers and implements used to transport harvested items should be food-grade, properly cleaned and in good condition.**

- a. Wash and sanitize containers between uses.
- b. Do not use harvest containers for storage or transport of non-food items.
- c. Dispose of containers that cannot be effectively cleaned.

##### **2. Transfer of product to school kitchen should be done under supervision of the on-site professionals.**

- a. The garden supervisor should be in charge of the transport coming from the garden. The school food service staff should be in charge of receiving and handling the product when it gets to the kitchen.
- b. Product that is received by the kitchen should be already cleaned.

##### **3. On site HACCP guidelines and procedures are being followed for all garden items used in the school for consumption.**

- a. Do not handle ready to eat fresh produce with bare hands in the foodservice area (kitchen).
- b. Do not soak or store fresh produce in standing water.
- c. Product that has come into contact with potential sources of contamination (blood, bodily fluids, chemicals, broken glass, animal contact, etc.) is disposed of.
- d. Garbage receptacles are kept tightly closed and facility area is kept clean.
- e. Food contact surfaces are kept clean and are sanitized prior to use. Cleaning logs are maintained.

##### **4. Harvested items are labeled and properly stored prior to use in recipes.**

- a. Harvested items should be clearly labeled as being from the school garden.
- b. Harvested items should be transported to the storage area in less than 6 hours and be stored by harvest and not commingled with other produce.
- c. Store prepared fresh produce at 40°F or below.
- d. Use fresh produce items within 72 hours (3 days) of receipt at the facility.
- e. Do not use produce that shows visible signs of damage or decay or has an off odor.
- f. Do not shell peas for anything other than immediate consumption. Shelled peas cannot be accepted by the kitchen for processing.

# Product Quality Assurance School Garden Guidelines Weekly Checklist

Garden Location Name: \_\_\_\_\_ Date: \_\_\_\_\_

Checklist Completed By (Name): \_\_\_\_\_

		YES	NO
<b>A</b>	<b>Personal Hygiene</b>		
1	Restrooms and hand washing facilities are available for garden workers.		
2	Proper personal hygiene practices are being followed.		
3	Ill persons are prevented from working and handling food.		
<b>B</b>	<b>Plot Location and Soil Treatment</b>		
1	Growing plot is positioned so that it is not in the path of runoff from agricultural areas, parking lots and roads, or other sources of potential contamination.		
2	Growing plot is properly protected from domestic and/or wild animals.		
3	Raised bed gardens, containers, stakes or trellises should be made of non-toxic, non-leaching material.		
4	Use only properly treated compost or commercially prepared compost and/or fertilizer.		
5	Label instructions for the use of pesticides, soil amendments, and fertilizers are being followed. MSDS are being maintained for all chemicals used.		
6	Chemicals, including fertilizers, paints, lubricants, cleaning supplies, etc., are not stored in close proximity to the garden or to harvested food.		
7	Food scraps / food waste is not being added to the garden soil.		
<b>C</b>	<b>Plants and Seeds</b>		
1	Plants and/or seeds are being used that are current with Alaska State Division of Agriculture website guidance.		
2	Only certified seed potatoes are being used to plant potatoes.		
3	Sprouts for harvesting are not being grown.		
<b>D</b>	<b>Water / Irrigation</b>		
1	Only potable water (drinking water) is being used for irrigation.		
2	Gray water, waste water, recycled water or runoff water from any source is not being used.		
3	Ensure that drinking water system safety is not compromised by cross-connections as required by DEC Drinking Water Program.		
4	Containers to transport water that comes into contact with the plant or produce are food grade quality.		
<b>E</b>	<b>Insecticides / Pesticides</b>		
1	Pesticides are not being used by unauthorized personnel.		
2	If pesticides are being used, they are applied in accordance with State of Alaska DEC school pesticide regulations.		



# Product Quality Assurance Garden to Cafeteria Guidelines Weekly Checklist

Garden Location Name: \_\_\_\_\_

Date: \_\_\_\_\_

Checklist Completed By (Name): \_\_\_\_\_

		YES	NO
<b>F</b>	<b>Harvest and Preparation</b>		
1	Containers and implements used to transport harvested items are food-grade, properly cleaned and in good condition.		
2	On site HACCP guidelines and procedures are being followed for all garden items used for consumption.		
3	Transfer of product to school kitchen should be done under supervision of the on-site professionals, both the garden supervisor & school food service.		
4	Harvested items are labeled and properly stored prior to use.		
5	Product that has come into contact with potential sources of contamination (blood, bodily fluids, chemicals, broken glass, animal contact) is disposed of.		
6	Garbage receptacles are kept tightly closed and facility area is kept clean.		
7	Food contact surfaces are kept clean and are sanitized prior to use. Cleaning logs are maintained.		

The Alaska School Garden Guidelines are adapted from USDA's  
Good Agricultural Practices (GAP) Audit Checklist.

The produce industry recognizes GAP as the best practices.

If you are interested in getting a GAP Audit done at your facility, or for more information on

Good Agricultural Practices, go to:

[http://dnr.alaska.gov/ag/ag\\_is.htm](http://dnr.alaska.gov/ag/ag_is.htm)

To do a GAP self-assessments online, go to:

[http://groups.ucanr.org/UC\\_GAPs/GAP\\_Self-Audits/](http://groups.ucanr.org/UC_GAPs/GAP_Self-Audits/)

For more information on food safety in school gardens visit:

<http://www.fns.usda.gov/cnd/F2S/implementing/safety.htm#Gardens>



# Product Quality Assurance School Garden Guidelines Weekly Checklist

## Corrective Actions

For any items checked "NO", please document the corrective actions below:

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## Weekly Checklist Guidelines

- For client-managed gardens, the client representative in charge of the garden or client-employed designee must complete this checklist weekly and provide a copy to the school manager on site.
- For school-managed gardens, the school person in charge of the garden or their on-site designee must complete the checklist weekly.
- All completed garden checklists (completed by client and/or school staff) must be kept on file for two school years with other food safety / HACCP documents at the unit for food safety audit review.

# Dude



# WASH your hands!

Next time you see someone skip out on the suds, look at them and say, "Dude, wash your hands!"

## How to wash your hands

- Wet hands with water
- Use enough soap to build a good lather
- Scrub hands vigorously, be sure to reach all areas of the fingers and hands for at least 10 seconds to loosen pathogens
- Rise hands to remove all soap residue while continuing to rub hands
- Dry hands with a paper towel

## When should you wash your hands?

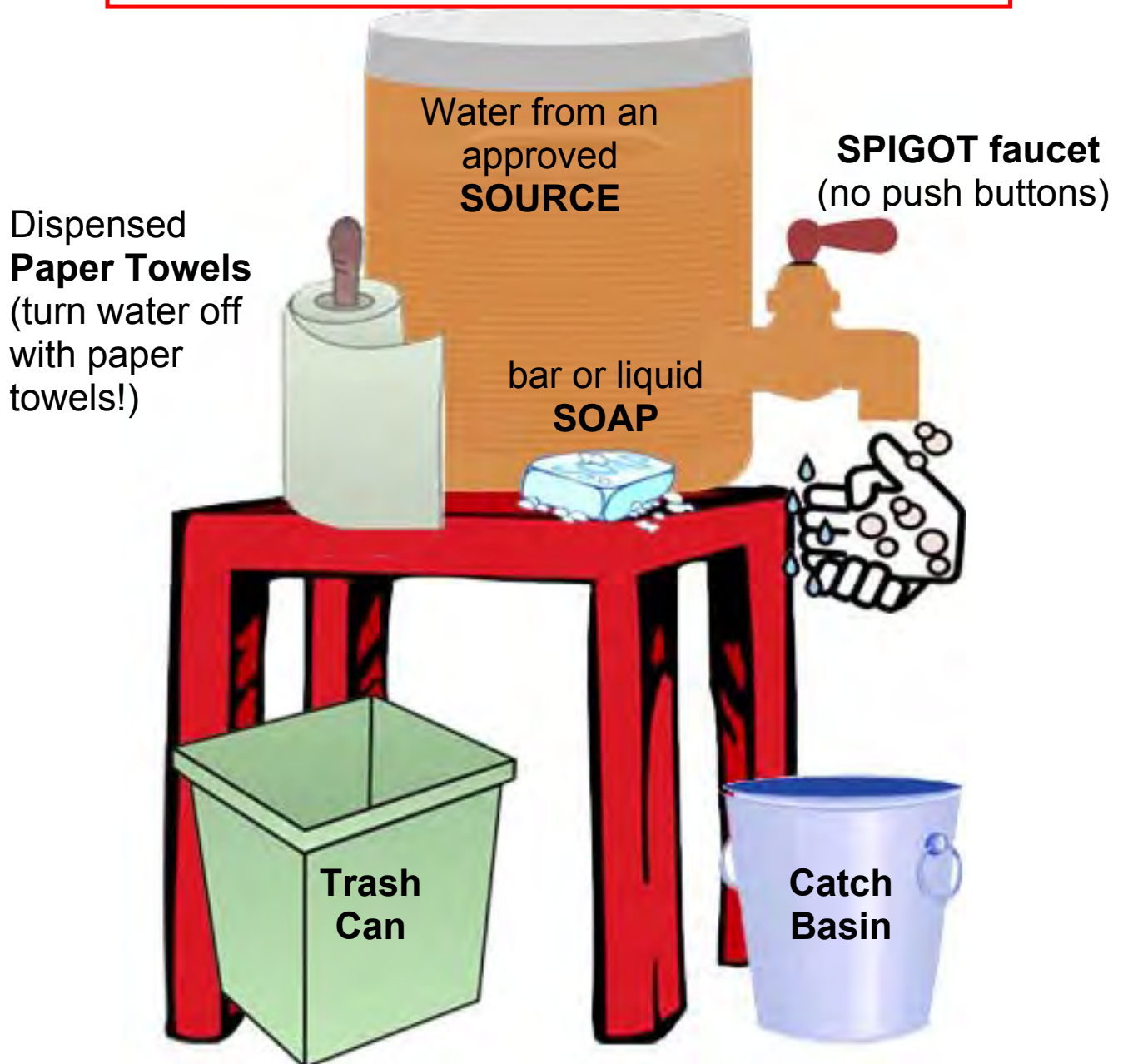
- After eating, drinking, or smoking
- After using chemicals in the gardening process
- After using the restroom
- After coming into contact with any contaminant source
- After handling garbage
- Before harvesting anything out of the garden

# HANDWASHING STATION

*Use it **OFTEN!***

Use **CLEAN** water jugs:

1. **SANITIZE** with 2 tbsp unscented bleach in 1 gallon of water – **SLOSH** to cover all surfaces.
2. Let **STAND** 5 minutes and **DRAIN**. **DO NOT RINSE!**
3. **FILL** with approved drinking water



## Notes

This image shows a single sheet of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.



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